

IN THE SUPERIOR COURT OF THE STATE OF CALIFORNIA
IN AND FOR THE CITY AND COUNTY OF SAN FRANCISCO

LESLIE J. WHITELEY and
LEONARD WHITELEY,

Plaintiffs,

vs.

No. 303184

RAYBESTOS-MANHATTAN, INC.,
et al.,

Defendants.

_____/

DEPOSITION OF RONALD M. DAVIS, M.D.
VOLUME II
December 29, 1999

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EXHIBITS

DEFENDANT'S EXHIBIT 39, 375
A FOUR-PAGE REPORT ENTITLED
"LESLIE WHITELEY'S LUNG CANCER,
DIAGNOSED AT THE AGE OF 38,
WAS CAUSED BY HER CIGARETTE
SMOKING," PREPARED BY
RONALD M. DAVIS, M.D.,
NOVEMBER 17, 1999.

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BE IT REMEMBERED THAT, pursuant to Notice of
Taking Deposition, and on Wednesday, December 29,
1999, commencing at the hour of 10:27 a.m. of
the said day, by telephonic communication,
before me, INA C. LeBLANC, a Certified Shorthand
Reporter, State of California, appeared
RONALD M. DAVIS, M.D., a witness in the
above-entitled court and cause, produced on
behalf of the defendant, who being by me first
duly sworn, was then and there examined and
interrogated by Attorney WILLIAM E. LATHAM, II,
representing the law offices of WOMBLE, CARLYLE,
SANDRIDGE & RICE, 200 West Second Street,
Winston-Salem, North Carolina, counsel for the
defendant, R.J. Reynolds Tobacco Company.

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APPEARANCES OF COUNSEL

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1 FOR DEFENDANT R.J. REYNOLDS TOBACCO COMPANY:

2
3 WOMBLE, CARLYLE, SANDRIDGE & RICE
4 BY: WILLIAM E. LATHAM, II
5 Attorney at Law
6 (By telephonic communication)
7 200 West Second Street
8 Winston-Salem, North Carolina 27102
9
10

11 The following proceedings were thereupon had,
12 and the following testimony was thereupon given,
13 to-wit:
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1 RONALD M. DAVIS, M.D.
2 being first duly sworn, testified as follows:
3

4 EXAMINATION BY MR. LATHAM
5 MR. LATHAM: Dr. Davis, this is
6 Will Latham. I'm with the Womble, Carlyle firm in
7 North Carolina, and I represent R.J. Reynolds in the
8 Whiteley case.
9 Q. Do you understand that this is a continuation of
10 your November 16th deposition for the Whiteley case?
11 A. Yes.
12 Q. If you don't understand any questions that I
13 ask, please tell me and I will rephrase them.
14 Otherwise, I'll assume that you believe you

15 understood the question that I asked.
16 A. Fine.
17 Q. Have you been deposed or testified in any other
18 cases since your November 16th deposition in this
19 case?
20 A. I testified in the Engle case in Florida, in
21 phase two of that case. I don't remember the exact
22 dates, but I believe it was after the November 16th
23 deposition.
24 Q. Have you been deposed in any other cases since
25 then?

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1 A. Not that I recall.
2 Q. Have you completed your work for the Whiteley
3 case, Dr. Davis?
4 A. What do you mean by "work"?
5 Q. Well, do you plan to do any additional research
6 or prepare any additional reports other than what
7 you've done to date before testifying?
8 A. I don't have any plans to do that at this point
9 in time. If plaintiffs' counsel asks me to do
10 something else, I'll try to do it.
11 Q. Okay. Have you spoken with plaintiffs'
12 counsel about when you expect to be testifying in the
13 case?
14 A. I believe that plaintiffs' counsel provided some
15 dates to my office about when I might testify in the
16 case, but I don't recall what those dates are.
17 Q. Do you remember whether they were early or late
18 as part of the trial?
19 A. I don't recall.
20 MS. CHABER: Counsel, we don't even
21 know what our courtroom is or what our schedule is,
22 so I don't know what "early" or "late" means.
23 MR. LATHAM: Dr. Davis, we've got
24 about an hour today, and I want to spend most of
25 the time talking about a report that I believe you
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1 prepared related to the Whiteley case. I've got in
2 front of me a document entitled "Leslie Whiteley's
3 Lung Cancer, Diagnosed at the Age of 38, Was
4 Caused by Her Cigarette Smoking," prepared by
5 Ronald M. Davis, M.D., November 17th, 1999.
6 Q. Do you have a copy of that document in front of
7 you?
8 A. Yes.
9 Q. Did you prepare this document?
10 A. I did.
11 MR. LATHAM: Curtis, do you have a
12 copy of it with you and the court reporter?
13 MR. PERRY: Yes.
14 MR. LATHAM: Can I mark this as
15 an exhibit, please. And from the earlier
16 deposition, the last number was 38, so if we could
17 make this 39.
18 MR. PERRY: All right. Go ahead.
19 We'll mark it after the depo.
20 MR. LATHAM: Sure.
21 Q. Dr. Davis, why did you draft this document?

22 A. I drafted the document to address some
23 issues that were discussed in my earlier deposition,
24 some issues that were discussed, or perhaps a better
25 word might be "debated," in my deposition in which
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1 the counsel for the defense warned me that I would be
2 asked about at trial, if I did testify at trial.
3 Q. Dr. Davis, did you hear me?
4 A. No.
5 Q. I'm sorry. Was this document prepared to
6 respond to questioning by Mr. Furr at your
7 November 16th deposition?
8 A. Well, I gave one answer a few moments ago.
9 Maybe you didn't hear my answer. Did you hear my
10 answer to your question why did I prepare this
11 document?
12 Q. I'm following up.
13 The reason you prepared it was to respond to the
14 questioning by Mr. Furr at your November 16th
15 deposition?
16 A. To follow up on that questioning, to provide
17 further clarification of my views.
18 Q. Other than preparing --
19 A. I'm sorry. I can't hear you.
20 MS. CHABER: You're cutting out,
21 Will.
22 THE WITNESS: I can't hear him
23 either.
24 MR. PERRY: Neither can I.
25 MS. CHABER: Well, then, it must be
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1 over.
2 THE WITNESS: If he's on a speaker
3 phone, it might help to pick up the phone.
4 MR. LATHAM: Let me try again. Can
5 you hear me now?
6 THE WITNESS: Yes.
7 MR. PERRY: Yeah.
8 MR. LATHAM: Q. Other than
9 preparing this document entitled "Leslie Whiteley's
10 Lung Cancer, Diagnoses at the Age of 38, Was Caused
11 by Her Cigarette Smoking," have you done any other
12 work or prepared any other reports?
13 A. I have reviewed some other materials that
14 plaintiffs' counsel sent me.
15 Q. What did you review?
16 A. Um, there were medical records from
17 Record Trak that were sent to me, a deposition
18 from Dr. Robert Phillips, redacted medical
19 records from Dr. Jeffrey Richardson, and the
20 deposition transcripts and/or videotapes from
21 Dr. Donald Tashkin, Martin Blinder, Mace Beckson,
22 Charles Cicchetti -- I may be mispronouncing
23 these names -- Alan Feingold, Alan Smith and
24 William Wecker.
25 Q. Have you reviewed all of those deposition
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1 transcripts?
2 A. Well, I've looked at these materials at varying
3 levels of thoroughness. Some of them I've looked at
4 more carefully than others.
5 Q. Which did you focus on?
6 A. The -- There was one other document which I
7 forgot to mention, and that was responses to
8 interrogatories related to [DELETED - PERSONAL INFORMATION]
9 So I focused probably more on the responses
10 to the interrogatories and the deposition from
11 Dr. Tashkin than the other materials I received.
12 Q. Can you tell me why you focused on both the
13 interrogatories and the deposition of Dr. Tashkin?
14 A. One of the issues that I was asked about quite a
15 bit at the earlier deposition was
16 [DELETED - PERSONAL INFORMATION]
17 and that seemed
18 to be the focus of the interrogatories and was also
19 discussed in Dr. Tashkin's deposition. So that's why
20 I looked at those with a bit more focus than the
21 other materials.
22 Q.
23 [DELETED - PERSONAL INFORMATION]
24
25 A.
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1 Q.
2 A.
3
4
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7 Q.
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9 A. [DELETED - PERSONAL INFORMATION]
10
11
12 Q.
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14
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16 A.
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21 Q.
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25 A.
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5 [DELETED - PERSONAL INFORMATION]
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12 Q. Dr. Davis, could you explain the steps that
13 you went through to prepare the report that we're
14 talking about, "Leslie Whiteley's Lung Cancer,
15 Diagnosed at Age 38, Was Caused by Her Cigarette
16 Smoking"?

17 A. I didn't really follow any special protocol.
18 I'm not exactly sure what you mean by "steps." I
19 worked on it the evening after my deposition, and I
20 finished it sometime after the -- after midnight,
21 which is why it's dated November 17th. I think I
22 worked on it the evening after the deposition and
23 then early the next morning.

24 Q. Did you review any scientific or medical
25 references in preparation of this report?

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1 A. I used the 1989 Surgeon General's report on
2 smoking and health, which is one of the citations in
3 the report. I also consulted the 1988 Surgeon
4 General's report, which is also cited at the end of
5 the report.

6 In addition, I pulled some data off of the
7 National Cancer Institute's web site, and you can see
8 the data that I cited at the end of the report from
9 the National Cancer Institute publications on SEER
10 data.

11 Q. Did you consult any other references in
12 preparing this report?

13 A. No. Not that I recall.

14 Q. Did you run any computer searches to try and
15 identify references to prepare this report?

16 A. Not that I recall.

17 Q. How did you make your selection of the '89
18 Surgeon General's report, the '88 Surgeon General's
19 report, and the NCI data? How did you decide those
20 would be the references that you would look at to
21 prepare the document?

22 A. The NCI SEER data are the best data that we have
23 available for cancer incidence in the United States,
24 so that's why I consulted that source.

25 The 1988 Surgeon General's report summarizes
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1 31 published studies on the average number of puffs
2 per cigarette, and that's why I cited the 1988
3 Surgeon General's report, because I was attempting to
4 calculate the number of puffs of cigarette smoke that
5 Ms. Whiteley has taken during the course of her
6 lifetime.

7 The 1989 Surgeon General's report was consulted
8 because it has information on relative risk of lung
9 cancer relating to cigarette smoking, which was part
10 of the analysis that I was doing in this report.

11 Q. Dr. Davis, did you review any of the studies
12 that Mr. Furr asked you about in your November 16th
13 deposition?

14 A. I don't remember which studies you're referring

15 to.
16 Q. Well, have you gone back to your deposition and
17 looked to see, for example, some of the exhibits that
18 were attached and reviewed them since your
19 deposition?
20 A. I don't believe so, although I'm not sure which
21 studies you might be referring to.
22 Q. Well, he asked you about a number of documents,
23 and I just want to know whether you have gone
24 back and reviewed any of the documents he asked you
25 about?

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1 MS. CHABER: Vague and ambiguous.
2 THE WITNESS: I'm not sure which
3 documents you're referring to. If you could be
4 precise, I would be happy to respond.
5 MR. LATHAM: Q. In preparing your
6 report, why didn't you attempt to consult other
7 references than the three that you chose?
8 A. The three that I chose gave me the information I
9 needed to prepare this report. This report was
10 looking at a fairly narrow issue, but one which
11 counsel for the defense was focusing on quite a bit
12 in my deposition, and that issue is the age of lung
13 cancer diagnosis for Ms. Whiteley.
14 I'm going to put the phone down for one moment.
15 Excuse me. I'll be right back.
16 MR. LATHAM: Sure.
17 (Pause.)
18 MR. LATHAM: Q. Dr. Davis, have you
19 found any studies that report the risk of lung cancer
20 for female smokers under the age of 40?
21 A. Not that I recall.
22 Q. Have you found any studies that report overall
23 mortality risk for female smokers under the age
24 of 40?
25 A. Could you repeat the last question?

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1 Q. Have you found any studies that report risks for
2 overall mortality for female smokers under the age of
3 40?
4 A. No, and I explained the reason why in this
5 report I wrote.
6 Q. I understand that.
7 Mr. Furr asked you if you knew of any. I want
8 to ask you if you found any since your deposition.
9 A. No.
10 Q. Dr. Davis, are you familiar with the World
11 Health Statistics Annual?
12 A. Yes, I believe that's an annual summary of
13 health statistics that is published by the World
14 Health Organization.
15 Q. Have you seen these reports or reviewed them in
16 the past?
17 A. On occasion.
18 Q. Would you consider these reports reliable?
19 MS. CHABER: Vague and ambiguous.
20 THE WITNESS: What do you mean by
21 "reliable"?

22 MR. LATHAM: Q. Well, are they done
23 by competent investigators and statistics that can be
24 relied on?
25 A. I would assume they're done by competent
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1 investigators. In some cases, it's difficult to
2 generalize, because many of those data might come
3 from developing countries where there may be
4 questions about the validity of the data. In some
5 countries, for example, death certificates are
6 not filled out nearly as completely as they are in
7 developed countries. So there are some limitations
8 that are important to keep in mind when looking at
9 global data.
10 Q. Would data that's reported in the World Health
11 Statistics Annual be relevant to an analysis of the
12 epidemiology of smoking and lung cancer?
13 MS. CHABER: Vague and ambiguous,
14 overbroad.
15 THE WITNESS: Well, when the evidence
16 on smoking and lung cancer has been reviewed in the
17 past, for example, for Surgeon General's reports on
18 smoking, typically, any available data are
19 considered, including data from the United States as
20 well as data from outside the United States. In each
21 case, under each study, the strengths and weaknesses
22 of the study are considered when deciding whether to
23 consider that study in coming to conclusions.
24 MR. LATHAM: Q. Would the World
25 Health Statistics Annual be a reliable source for
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1 age-specific lung cancer mortality estimates?
2 MS. CHABER: Objection, vague and
3 ambiguous and overbroad.
4 THE WITNESS: Age-specific lung
5 cancer --
6 What was the rest of it?
7 MR. LATHAM: Q. -- mortality
8 estimates.
9 A. It all depends on which data or which estimates
10 you're talking about. I really don't understand
11 exactly what you're asking.
12 Q. Well, I'm asking if they report the lung cancer
13 mortality statistics for people aged 70 to 80, would
14 that be a reliable source to go to to find that kind
15 of data?
16 A. That depends where the data come from. Are you
17 talking about data for the whole world, data for
18 individual countries, or data for a region of the
19 world, for example, a continent? I don't know what
20 you mean.
21 Q. For the United States.
22 A. For the United States, I would not have to go to
23 the World Health Organization. Let me rephrase
24 that.
25 To find valid lung cancer mortality data for the
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1 United States, I would not have to go to the World
2 Health Organization. I would consult the vital
3 statistics for the United States, which is
4 compiled -- collected and compiled by the National
5 Center for Health Statistics, which is part of the
6 U.S. Centers for Disease Control and Prevention.
7 They collect all the information on the births,
8 deaths, causes of death, and so on.
9 Q. Dr. Davis, are you familiar with a book titled
10 "The Causes of Cancer" by Doll and Peto?
11 A. I'm aware of it.
12 Q. Have you seen that text or reviewed it in the
13 past?
14 A. I probably have, but I haven't recently.
15 Q. Would you consider that a reliable source for
16 information on cancer?
17 MS. CHABER: That's vague and
18 ambiguous and overbroad.
19 THE WITNESS: It would depend on the
20 information that you're referring to. There's a lot
21 of different kinds of information in that report, in
22 that book. Some of it may be outdated. I can't
23 remember the year of publication, but --
24 MR. LATHAM: Q. 1981.
25 A. There was one book or report from Doll and Peto
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1 from 1978 that I referred to in the report that we're
2 discussing. It's actually referenced in the 1989
3 Surgeon General's report, and it's on page two of the
4 report that we're discussing today.
5 Q. Okay.
6 A. I don't know if that's the report you're talking
7 about or another report. Did you say 1981?
8 Q. Yes, 1981. It's a textbook.
9 A. Right. Well, I would have to answer that
10 question depending on the specific type of
11 information that you're referring to, rather than the
12 whole book. It's almost 20 years old.
13 Q. Doll and Peto are respected researchers, though,
14 correct?
15 A. Yes.
16 Q. Are you familiar with a book edited by
17 Richard Doll, Joseph Ramon (phonetic) and C.S. Muir
18 entitled "Trends in Lung Cancer Incidence and
19 Mortality" published in '94?
20 A. I don't remember that one off the top of my
21 head.
22 Q. There's a chapter in the book titled
23 "Lung Cancer" by -- I don't know how to pronounce
24 the last name. It's Frank Gilliland, G-i-l-l-i-a-n-d,
25 and Jonathan Samet, S-a-m-e-t. This chapter contains
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1 incidence in mortality trends for lung cancer.
2 I want to know if you're familiar with that chapter?
3 A. I don't recall it.
4 Q. Are you familiar with the nurses' health study?
5 A. Yes.
6 Q. Is that a reliable study?
7 MS. CHABER: For what?

8 Vague and ambiguous.
9 THE WITNESS: It's a large study that
10 collects many different types of information, so it
11 would be important to specify what you're referring
12 to when you ask about its reliability.
13 MR. LATHAM: Q. Have you seen or
14 reviewed publications that relate to smoking and
15 health based on this study?
16 A. I probably have in the past, but I don't
17 remember the specifics. They have published a huge
18 number of papers from that study looking at cancer
19 and other diseases in relation to many different
20 behaviors and exposures, so I can't remember all the
21 different things they looked at. But I would be
22 surprised if they had not looked at smoking.
23 Q. Are the publications that you have reviewed from
24 that study authoritative and reliable?
25 MS. CHABER: Vague and ambiguous.
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1 Overbroad.
2 THE WITNESS: It's difficult to
3 generalize.
4 MR. LATHAM: Q. Dr. Davis, in the
5 Henley trial, you testified you had reviewed
6 monographs on tobacco and health issues prepared
7 by NCI or other federal agencies; do you recall
8 that?
9 A. I've given many different depositions.
10 Q. This was at trial, and it was on direct
11 examination. You said you had been asked in the past
12 to review monographs for different agencies.
13 A. I see. Well, I don't remember all the questions
14 that have been asked and all the different
15 testimonies that I've given, so I can't really say
16 whether I recall it or not.
17 Q. Okay. Have you indeed reviewed monographs from
18 the National Cancer Institute in relation to tobacco
19 and health?
20 A. Yes.
21 Q. Do you recall what monographs you did review?
22 A. Well, the NCI has published eight or nine
23 different monographs on tobacco and health, and I
24 believe I was asked to review a few of those during
25 their production when I was at the Office on Smoking
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1 and Health from 1987 to 1991. And I don't recall the
2 titles. They may be listed in my curriculum vitae,
3 but I'm not sure.
4 Q. Would one of the monographs you reviewed be
5 monograph eight titled "Changes in Cigarette-Related
6 Disease, Risks and Their Implication for Prevention
7 and Control"?
8 A. It's possible. I remember that monograph. I
9 don't remember whether I commented on it or not
10 during its production.
11 Q. But you have seen it and reviewed it in the
12 past, Dr. Davis?
13 A. Yes.
14 Q. Would you consider that a reliable source?

15 MS. CHABER: For what?
16 Vague and ambiguous.
17 MR. LATHAM: For smoking and health
18 issues.
19 THE WITNESS: Well, again, I -- When
20 you're talking about very large reports, I think it's
21 important to be specific.
22 MR. LATHAM: All right. I'll get
23 very specific then.
24 Q. Would it be a reliable source for age-specific,
25 all-cause mortality estimates?
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1 A. I would have to review what the monograph says
2 about age-specific, all-cause mortality estimates.
3 Q. You don't know if it would be?
4 A. No. I don't have the report in front of me. I
5 haven't reviewed it in some time, and I don't
6 remember what it says about that specific topic.
7 Q. Would it be a reliable source for age-specific,
8 lung-cancer mortality estimates?
9 A. Same answer.
10 Q. This monograph was developed under the
11 leadership of a scientist named Donald Shopland.
12 Is he a competent, reliable, authoritative
13 investigator?
14 MS. CHABER: Vague and ambiguous and
15 overbroad.
16 THE WITNESS: I can't comment on
17 that.
18 MR. LATHAM: Q. Some of the
19 scientific editors of the monograph were
20 Dr. David Burns, Lawrence Garfinkel and
21 Jonathan Samet. Are these scientists well-respected
22 experts in the field of smoking and health?
23 A. I don't know what you mean by "well-respected."
24 I haven't taken a poll on how scientists look at
25 those people.
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1 Q. I'm asking your opinion.
2 A. On whether they're well respected?
3 Q. Right.
4 A. I haven't surveyed anyone to see if they respect
5 those people.
6 Q. My question is: Do you respect those three
7 scientists?
8 A. I can't say that I know Mr. Garfinkel well. I
9 have worked closely with Dr. Burns and Dr. Samet, and
10 I do respect them.
11 Q. Dr. Davis, do you know Dr. Michael Thun?
12 A. I know of him. I'm not sure whether we have
13 met. We've talked on the telephone once or twice.
14 Q. Do you agree that Michael Thun is a good and
15 well-respected epidemiologist?
16 A. I can't really comment. I don't know him well.
17 Q. Dr. Davis, have you done any original analyses
18 of the data from the ACS CPS II study for the
19 Whiteley case?
20 A. No.
21 Q. Other than the SEER data that's cited in your

22 report, which is the last page of the copy that I
23 have, did you look at any other SEER data?
24 A. I think I saw some earlier SEER data at the NCI
25 web site, data that were extracted from earlier NCI
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1 publications, and that was while I was preparing this
2 report. But I included the most recent statistics
3 that I found on the NCI's web site, which are from
4 1973 to 1996 as indicated in the footnotes to the
5 table at the end of my report.

6 Q. Did you go to any other Internet sites besides
7 the NCI web site to do your research for this
8 report?

9 A. I don't recall.

10 Q. Dr. Davis, earlier you mentioned that you had
11 reviewed a list of depositions of expert witnesses in
12 the Whiteley case, and you've outlined those that you
13 have reviewed. My question is: What did you learn
14 from your review of those depositions?

15 MS. CHABER: That's so vague and
16 overbroad.

17 MR. LATHAM: Q. You mentioned that
18 you focused on the Tashkin deposition. What did you
19 learn from the Tashkin deposition?

20 MS. CHABER: Same objection.

21 THE WITNESS: I learned what his
22 opinion [DELETED - PERSONAL INFORMATION]

23
24 That was the main thing that I learned.

25 MR. LATHAM: Q. I take it that you
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1 disagree with Dr. Tashkin's opinion.

2 A. I do.

3 Q. What is the basis for your disagreement with
4 Dr. Tashkin?

5 MS. CHABER: This has all been
6 asked and answered throughout the previous
7 deposition, and it's beyond what this continued
8 deposition was supposed to be. It wasn't supposed to
9 be a recitation again of Dr. Davis's opinions and the
10 basis for those opinions, because that was all set
11 forth previously. I object to going into this
12 again.

13 MR. LATHAM: We're not going very
14 far. He mentioned that he focused on that, and I
15 want to find out why.

16 MS. CHABER: Counsel, as you know,
17 depositions aren't ongoing. If I started re-taking
18 all the depositions of your experts and asking for
19 what they have read and reviewed since their original
20 deposition, we'd be in deposition for the next year.
21 This is not what this deposition was set up to do.
22 It was specifically with respect to that three-page
23 report that you have.

24 MR. LATHAM: This all relates to
25 it. I'll move on.

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1 Q. Dr. Davis, during your deposition on
2 November 16th, Mr. Furr asked you to cite a single
3 published or unpublished study or data set that shows
4 40-year-old smokers have a higher mortality rate
5 compared to 40-year-old nonsmokers. I take it this
6 two-and-a-half-page document is a response to those
7 kind of questions. My question to you is: Have you
8 found such a study?

9 A. No. And the reason why is set out in that
10 report that we've been discussing. The point I make,
11 which I just wanted to underline now, is that I don't
12 think the relative risk of getting lung cancer in
13 smokers under the age of 40 compared to nonsmokers
14 under the age of 40 is really relevant to the whole
15 question of whether cigarette smoking was the cause
16 of Ms. Whiteley's lung cancer. I believe the most
17 relevant epidemiologic statistic to use is her
18 exposure to cigarette smoking which relates in
19 particular to the number of years that she smoked and
20 the number of cigarettes that she smoked during those
21 years.

22 Q. Dr. Davis, during your earlier deposition,
23 Mr. Furr asked you the percentage of smokers who get
24 lung cancer before the age of 40, including those
25 with a 20- to 25-pack-year history, and you stated in

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1 response to that that you would do your best to find
2 that data so you could have it at your disposal for
3 trial. Have you found data that answers that
4 question?

5 A. Which question again?

6 Q. The percentage of smokers who get lung cancer
7 before the age of 40.

8 A. The data in my report look at the percentage of
9 all people who -- well, all white females who get
10 lung cancer at certain ages. I'm not aware of
11 statistics on the percentage of smokers who get lung
12 cancer at certain ages. I imagine somebody could
13 collect that information. You could probably get
14 it out of the SEER data if the SEER data include
15 smoking status for each person in the SEER registry;
16 but I think the SEER data get at the issue that
17 Mr. Furr was raising, and that is: How common is the
18 diagnosis of lung cancer under age 40?

19 Q. It's uncommon, isn't it, Dr. Davis?

20 A. It is uncommon, and, as I mentioned, the
21 incidence of lung cancer follows a bell-shaped curve,
22 roughly. I say "roughly" because the right side of
23 the bell-shaped curve really doesn't go down like it
24 would if it were a true bell, but it's roughly a
25 bell-shaped curve.

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1 On the left side of the bell, which heads
2 towards the younger ages that we're discussing, there
3 are not, relatively speaking, that many lung cancer
4 diagnoses that occur under age 40. And as I point
5 out in my report, some lung cancers have to occur at
6 the end of the bell, that is, under age 40, and
7 Ms. Whiteley, unfortunately, was one of them. But

8 that in no way invalidates cigarette smoking as the
9 cause of her lung cancer when you look at her smoking
10 history which includes more than 220,000 cigarettes
11 smoked over her lifetime and more than 2.4 million
12 puffs of cigarette smoke that she took over her
13 lifetime.

14 Q. Dr. Davis, Mr. Furr asked you about some slides
15 you presented at the Mealey's conference. Have you
16 provided any slides based on the additional research
17 that you have done?

18 A. No.

19 Q. Dr. Davis, on page one of your report, second
20 paragraph, the very first sentence reads "The most
21 relevant epidemiologic statistic to use in assessing
22 the role of cigarette smoking in Ms. Whiteley's
23 lung cancer is not the absolute yearly incidence
24 of the disease in a woman of her age, but rather
25 the relative risk of developing (or dying from)

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1 lung cancer in women with a smoking history like
2 Ms. Whiteley's, compared to women never-smokers".

3 My question is: Wouldn't a more relevant
4 statistic than that which you cite be to compare
5 Ms. Whiteley's smoking history as well as her age of
6 diagnosis to never-smokers?

7 A. I think you only need to factor in age if age
8 somehow affects the causation of lung cancer by
9 cigarette smoking. I know of no reason why lungs in
10 20- or 30-year-olds are somehow immune to the effects
11 of cigarette smoke compared to the lungs of 40- or
12 50-year-olds. So I don't think age is relevant.
13 I think smoking history is the issue and total
14 exposure to cigarette smoke and the poisons that
15 it contains.

16 Many diseases are indeed age related. Some
17 leukemias, for example, only occur in children.
18 Some other cancers may only occur in those in
19 their 60s and 70s.

20 Lung cancer can occur in earlier ages and at
21 later ages, and if people start using tobacco at
22 an early enough age, they can get a tobacco-related
23 disease at earlier ages. So I stand by the
24 statement in my report that you read a few moments
25 ago.

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1 Q. I understand that, but you would agree that
2 lung cancer is an age-related disease, wouldn't you,
3 Dr. Davis?

4 A. I think it's age related because most people
5 need to smoke for 20 or 30 or 40 years until you
6 see them acquire a smoking-attributable disease
7 like lung cancer. That's why it's age related.
8 It's not age related because somehow people at
9 younger ages are immune to the ill effects of
10 cigarette smoking. It's not like some of the
11 leukemias, as I mentioned before, which only occur
12 at younger ages. If people started smoking at age
13 five or three, I imagine we would start seeing
14 a lot more lung cancers developing in people's 20s

15 and 30s. Actually, there are some countries where
16 people do start smoking at very young ages, in their
17 preteens. That's not so common in the United States;
18 but if it were common, I think we would be seeing
19 a lot more lung cancers at earlier ages, which
20 emphasizes my point: Lung cancer is only age
21 related because smoking behavior is age related.

22 MR. LATHAM: Okay. Dr. Davis,
23 that's probably all the questions that I have. I
24 know that Curtis Perry wanted about 15 minutes.
25 Curtis, you can take over.

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1 MR. PERRY: All right.

2

3 EXAMINATION BY MR. PERRY

4 MR. PERRY: Dr. Davis, I'm
5 Curtis Perry, and I represent Philip Morris in this
6 matter. Just a few questions about your report.

7 Q. First, is it your opinion, Dr. Davis, that age
8 of diagnosis is irrelevant for determining how likely
9 it is that smoking contributed to a lung cancer?

10 A. Well, age is important only insofar as it
11 indicates how long the person has been smoking by the
12 time they're diagnosed with lung cancer.

13 So Ms. Whiteley's age at diagnosis, 38 years of
14 age, is important because it tells us how many years
15 she was smoking before she got her lung cancer, which
16 is a bit over 25 years. So age at diagnosis is
17 important only for telling us, in my opinion, how
18 long they've been smoking.

19 Again, to explain it more fully, I think
20 25 years of smoking is a huge risk factor for getting
21 lung cancer, whether those 25 years occur before age
22 40 or after age 40.

23 Q. Let me ask you: Do you consider that the
24 relative risks for lung cancer associated with
25 smoking are identical among women less than 40 and

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1 women older than 60?

2 MS. CHABER: Can I hear that again?

3 MR. PERRY: Sure.

4 Q. Do you consider that the relative risks for lung
5 cancer associated with smoking are identical among
6 women less than age 40 and women older than age 60?

7 MS. CHABER: Incomplete
8 hypothetical. With identical smoking histories for
9 the same duration?

10 MR. PERRY: Correct.

11 MS. CHABER: The women over 60
12 started smoking when they were 40?

13 MR. PERRY: Possibly. If they have
14 the same smoking duration, you can do the math.

15 Q. The question is: Is a woman under the age 40 --
16 let's make it more specific.

17 A woman under the age 40 with a 25-year smoking
18 history, does she have the same relative risk for
19 lung cancer associated with smoking as a woman over
20 the age of 60 with a 25-year history of smoking?

21 A. Well, the hypothetical certainly doesn't apply

22 to Ms. Whiteley's case. I mean, Ms. Whiteley is
23 obviously not over 60.
24 Q. But she is under 40. So if you can answer my
25 question, I would appreciate it.

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1 MS. CHABER: Incomplete
2 hypothetical.
3 THE WITNESS: Well, I indicated in my
4 report that we don't have relative risk estimates for
5 female smokers under the age of 40 in relation to
6 cigarette smoking. So if we don't have those
7 relative risk estimates for under age 40, then I
8 can't answer your hypothetical.
9 But for reasons I explained in the report, I
10 think the most relevant epidemiologic statistic is
11 the duration and amount of exposure to cigarette
12 smoke.
13 MR. PERRY: Q. Dr. Davis, are most
14 women with a smoking history like Ms. Whiteley's
15 older or younger than she is?
16 A. Um, I don't know that there would be a huge
17 difference. I guess another way to phrase your
18 question would be: Do most women who smoke start
19 smoking at the age that she started smoking at?
20 On average, I suspect that most women who smoke
21 now in the United States start smoking perhaps
22 at a slightly older age, but not by much.
23 Q. So the answer to my question is you don't
24 know the answer, because you kind of rephrased
25 it.

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1 A. Well, she began to smoke at about age 13, and
2 she smoked till 1998 or so, and so that's a little
3 over -- that's about a 25-year history of cigarette
4 smoking. So if you're looking at all women who have
5 been smoking for 25 years, maybe they would be a
6 little bit older than her because they might have
7 started smoking, on average, at age 15, perhaps, or
8 16.
9 Q. Well, also --
10 A. But there wouldn't be much of a difference.
11 Q. Also, Dr. Davis, that would include women
12 who have quit smoking but had a 25-year history
13 with smoking and quit smoking, say, ten years,
14 so they would be much older than Ms. Whiteley,
15 correct?
16 A. For those who quit smoking for ten years, yes.
17 I don't know what percentage of women who have
18 smoked for 25 years stop smoking for ten years
19 somewhere in the middle of their smoking. I would
20 have to go back to see the data on that. It's
21 probably not a very high percentage.
22 Q. On page one of your report, you cited a relative
23 risk factor of 20.4; do you see that?
24 A. Yes.
25 Q. That risk that you cited, was that based on

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1 women who were the same age as Ms. Whiteley?
2 A. It was the women who smoked 21 to 30 cigarettes
3 a day in the American Cancer Society Cancer
4 Prevention Study II. I don't know exactly what age
5 women in that smoking category would have been.
6 (To the reporter): I'm not sure if that
7 sentence was correct English. Could you read that
8 back to me.
9 (Record read by the reporter.)
10 THE WITNESS: Okay. I think it was
11 reasonably decent English.
12 MR. PERRY: All right.
13 Q. Doctor, would you agree with me the relative
14 risk you cited, 20.4, that was based mainly on lung
15 cancer responses observed in women older than
16 Ms. Whiteley in the CPS II data?
17 A. A large number of them would have been older,
18 but I don't know exactly how many or what
19 percentage.
20 I point out on page two of my report that the
21 CPS II data only included people who were 35 years of
22 age and older, so for that reason, I would imagine
23 that a large percentage of the women who smoked 21 to
24 30 cigarettes per day in that study were older than
25 Ms. Whiteley.

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1 Q. And then in that same sentence, I believe it's
2 the same sentence, you noted that 95.1 percent of
3 lung cancer deaths in women, blah, blah, blah,
4 I want to get to the last part, "... are directly
5 attributable to their cigarette smoking."
6 I was wondering what you meant by "directly
7 attributable."
8 A. Directly caused by.
9 Q. Okay. Do you distinguish between directly
10 attributable and indirectly attributable?
11 A. I wouldn't use the term "indirectly
12 attributable," because that would be like an
13 oxymoron. Maybe your question is: Why did I use
14 the word "directly"? I could have just dropped
15 the word "directly," but I wanted to emphasize the
16 point that we're talking about direct causation
17 here.
18 Q. Doctor, are you aware that assigned shares or
19 probabilities of causation do not obey the laws of
20 probability?
21 A. I don't know what you mean by that.
22 Q. Okay. Let me move on, since we don't have much
23 time, to the last page of your report -- it's
24 probably the last sentence -- and just ask you a
25 question about that.

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1 You refer in that last sentence -- Let me read
2 the last sentence. "Such a proposition would be
3 preposterous and would run counter to the
4 long-standing medical understanding of cancer
5 causation."
6 I was wondering if you could define for me what
7 long-standing medical understanding of cancer

8 causation specifically you're referring to.
9 A. The notion that exposure to a very toxic
10 carcinogenic substance like cigarette smoke
11 2.4 million times over one's life, especially
12 exposure at the level of alveoli and small passages
13 of the lungs, that that exposure would rise to the
14 top of anybody's list of culprits for causes of a
15 cancer. And unless there's some specific reason to
16 believe that that exposure is harmless below a
17 certain age and harmful above a certain age, then age
18 really isn't the issue.
19 Q. So you weren't specifically referring to the
20 specific theories on the actual mechanism of cancer
21 causation, were you?
22 A. Basically, what I'm referring to here is 40-plus
23 years of research on how smoking is related to lung
24 cancer and the complete absence of any information
25 that I'm aware of that shows that people under a
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1 certain age are immune to the ill effects of
2 cigarette smoking.
3 I think I'm also referring here to how chemicals
4 such as those in tobacco smoke cause cancer, and
5 whether you're talking about nitrosamines or
6 formaldehyde or acetaldehyde or benzo[a]pyrene, I'm
7 not aware of any information that says exposure in
8 your alveoli and the fine passages in your lungs to
9 those chemicals is somehow harmless below a certain
10 age but all of a sudden becomes harmful when you hit
11 a certain age.
12 Q. And Doctor, those chemicals you just mentioned,
13 do you know whether or not those chemicals are also
14 found in marijuana smoke?
15 A. I'm not aware that nitrosamines are in marijuana
16 smoke. I don't recall about the others. I'm
17 referring to the nitrosamines that are generated by
18 the metabolism of nicotine.
19 Q. On page two of your report, I believe it's in
20 the -- that would be the first full paragraph, you
21 cite to the '89 Surgeon General's report, to a chart
22 on page 45; do you see that?
23 A. Yes.
24 Q. And in the graph that you cite there on page 45,
25 isn't it true that subjects who started to smoke at
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1 younger ages also tended to have smoked for more
2 years?
3 A. In general, that might be true; but studies have
4 shown that age of smoking initiation is an
5 independent risk factor for lung cancer even when you
6 control for duration of smoking.
7 Q. Can you cite me any of those studies?
8 A. I think that's referenced in the excerpt from
9 the 1989 Surgeon General's report in the next
10 paragraph.
11 Q. Okay. Dr. Davis, have you done or relied on any
12 quantitative modeling that distinguishes the effects
13 of younger ages of smoking initiation from the effect
14 of years of smoking?

15 A. I don't know what you mean by "relied on."
16 Q. Okay. Have you done, yourself, or reviewed any
17 quantitative modeling that distinguishes the effects
18 of younger age at smoking initiation from the effect
19 of years of smoking?
20 A. I haven't done any studies myself along those
21 lines, but I am fairly certain I would have reviewed
22 them in the past, and I'm citing here a reference to
23 those studies from the 1989 Surgeon General's
24 report.
25 Q. And then just a few housekeeping details.

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1 On page one of your report, you stated that she
2 smoked for more than 25 years, and most of this
3 period her cigarette consumption was one to one
4 and a half packs per day. I was wondering what
5 material you relied on to make that statement.
6 A. I don't remember exactly where that comes
7 from, but I indicate information on her smoking
8 history in the second citation in my report on
9 page three.
10 Q. Just so I'm clear, it's your understanding that
11 Ms. Whiteley smoked in excess of 25 years, and the
12 majority of her smoking duration consisted of one to
13 one and a half packs per day?
14 A. Well, let me just -- Let me just reread citation
15 number two on page three of my report.
16 Q. Citation number two isn't going to tell you
17 anything about Leslie Whiteley's smoking history.
18 A. It's footnote number two. It indicates
19 information on her smoking history from, I believe,
20 answers to interrogatories, but it indicates -- It
21 indicates a half to one pack per day for seven
22 years, namely 1972 to 1978-'79, and then one to
23 one and a half packs per day for 20 years.
24 So when I say one to one and a half packs
25 per day for most of her 25 years of smoking,

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1 that's where that -- that's one place where that
2 comes from, because she was smoking one to one
3 and a half packs per day for 20 years and less
4 than that for only seven years.
5 Q. And that was from her interrogatory responses?
6 A. I'm almost certain that that's where those
7 numbers come from.
8 Q. Have you reviewed her medical records to
9 determine if her interrogatory responses regarding
10 her smoking history were consistent with the medical
11 records?
12 A. I have, and I provided notes for my earlier
13 deposition, which I think were Exhibit 5. I'm just
14 looking at those right now, and a report from
15 Dr. Barry Horn indicated that she smoked a half a
16 pack per day as a teen and one to one and a half
17 packs per day as an adult. So that would seem to be
18 consistent with her answers to interrogatories.
19 Q. Just two more questions, and I'll be done.
20 Dr. Davis, is it your opinion that the causes of
21 lung cancer are similar among subjects less than

22 40 years of age and more than 60 years of age at time
23 of diagnosis?
24 MS. CHABER: Incomplete
25 hypothetical.

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1 THE WITNESS: I'm not sure what you
2 mean.
3 MR. PERRY: Q. What don't you
4 understand about my question, and maybe I can help
5 clarify it.
6 A. Could you repeat it again, please.
7 Q. Sure. Dr. Davis, is it your opinion that the
8 causes of lung cancer are similar among persons less
9 than the age of 40 and persons greater than the age
10 of 60 at time of diagnosis of their lung cancer?
11 MS. CHABER: Same objection.
12 THE WITNESS: Is part of the
13 hypothetical that their smoking history is identical
14 and that their exposure to all other potential causes
15 of lung cancer are identical? In other words, their
16 exposure to secondhand smoke, their exposure to air
17 pollution, their exposure to radon, their possible
18 exposure to asbestos -- You mean all those other
19 things being equal?
20 MR. PERRY: Yes.
21 THE WITNESS: If the relative risk
22 was different, I think the differences would be
23 minor. I don't think there's a strong age effect on
24 lung cancer except as a reflection on exposure to
25 cigarette smoking and possibly other risk factors for
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1 lung cancer, such as secondhand smoke and maybe
2 radon. In other words, I don't think there's
3 anything inherent about age that makes somebody more
4 susceptible to lung cancer due to cigarette smoking
5 or radon or other things. There could be a small
6 effect. I don't mean to suggest there's absolutely
7 no age effect.
8 It's possible, for example, that somebody
9 smoking at age five, six or seven when their lungs
10 are immature or still developing, they may be
11 uniquely susceptible to the effects of cigarette
12 smoke. I've written about that. That might be why
13 children are uniquely susceptible or hypersusceptible
14 in respect to secondhand smoke in regard to
15 pneumonia, bronchitis and other effects of secondhand
16 smoke.
17 It's possible when people are over the age
18 of 60, when their lung function is continually
19 declining, that they may be more susceptible to
20 damage from carcinogens like cigarette smoke; but
21 to the extent that there are any age-related
22 differences in susceptibility of cigarette smoke or
23 other lung carcinogens, I think those differences
24 would be small.
25 MR. PERRY: Q. Do you consider it
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1 sound epidemiologic practice to include relative risk
2 for women over the age of 60 in calculating the
3 relative risk for women under the age of 40, assuming
4 they have the same smoking history?
5 A. I think one should use the best and most
6 relevant relative risks that one has available. If
7 one does not have available relative risk estimates
8 for women under age 40, one should use the next
9 best thing, the next most reliable relative risk
10 estimates that are available, such as those from
11 CPS II which would include women from 35 years
12 of age on up, because to not use those relative risk
13 estimates would mean we would be putting ridiculous
14 limitations on use of information in determining the
15 causation of illnesses.
16 You cannot always have data and relative
17 risk estimates for every age, sex, race, and any
18 other sociodemographic group that you might be
19 interested in looking at, so you use the best
20 information that is available, especially when
21 there's no reason to believe that one particular
22 gender or one race or one ethnicity or one age
23 group would be immune to a particular noxious
24 agent.
25 Q. And you talked about the bell curve and
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1 Ms. Whiteley falling on the left side of the bell
2 curve. With that bell-curve example, it's also
3 possible, is it not, Dr. Davis, that the lung
4 cancers occurring on the left side of the bell curve
5 may be caused by something other than cigarette
6 smoking?
7 A. When you look at the bell-shaped curve from SEER
8 data, for example, which I provided in my report, not
9 every one of those lung cancers would have been
10 caused by cigarette smoking, because those were all
11 lung cancers reported during those years.
12 However, as I've discussed in previous
13 depositions, 80 to 90 percent or more of lung cancers
14 are directly attributable to cigarette smoking. So
15 some of the cancers at any part of that bell might
16 not be due to cigarette smoking, but it probably
17 would only be about 10 or 20 percent of them.
18 Q. One more question I forgot to ask you earlier.
19 A. Could the court reporter just repeat the last
20 answer that I gave, because I want to make sure I
21 said it correctly.
22 (Record read by the reporter.)
23 MR. PERRY: One more that I forgot
24 to ask you earlier.
25 MS. CHABER: You keep saying
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1 "one more," Curtis. This is the fourth "one more."
2 MR. PERRY: This is it. I
3 promise.
4 Q. The chart on page 45 of the '89 Surgeon
5 General's report that I asked you about earlier --
6 A. Right.
7 Q. That chart is in reference to males only, is it

8 not?
9 A. Correct.
10 MR. PERRY: Thank you. That's all
11 I have.
12 THE WITNESS: Let me just make sure
13 about that. It was data from the U.S. veterans
14 study, and of course most veterans are males. I
15 don't have the report in front of me, so I don't
16 remember whether it was just restricted to males, but
17 if it wasn't, most of the people in that study would
18 have been male.
19 Do you have the report in front of you? Does it
20 say "males" in the title of that table?
21 MR. PERRY: I do have the report.
22 I assume you're referring to figure three, and
23 figure three is entitled "Lung Cancer Mortality Ratio
24 for Males by Age Began Smoking."
25 THE WITNESS: Okay. It must have
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1 been restricted entirely to males.
2 MR. PERRY: Thank you.
3 MS. CHABER: Is that it?
4 MR. LATHAM: That's it. No
5 questions.
6 MS. CHABER: All right.
7 MR. PERRY: All right. Thank you.

8
9 (DEFENDANT'S EXHIBIT 39 WAS
10 MARKED FOR IDENTIFICATION.)
11
12 (The deposition was concluded at 11:44 a.m.)
13
14
15

16 RONALD M. DAVIS, M.D.

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1 CERTIFICATE
2
3 I, the undersigned, a Certified Shorthand
4 Reporter, State of California, hereby certify that
5 the witness in the foregoing deposition was by me
6 first duly sworn to testify to the truth, the whole
7 truth, and nothing but the truth in the
8 within-entitled cause; that said deposition was taken
9 at the time and place therein stated; that the
10 testimony of said witness was reported by me, a
11 disinterested person, and was thereafter transcribed
12 under my direction into typewriting; that the
13 foregoing is a full, complete and true record of said
14 testimony; and that the witness was given an

15 opportunity to read and, if necessary, correct said
16 deposition and to subscribe the same.

17 I further certify that I am not of counsel or
18 attorney for either or any of the parties in the
19 foregoing deposition and caption named, nor in any
20 way interested in the outcome of the cause named in
21 said caption.

22 Executed this 30th day of December 1999.

23

24

25

INA C. LeBLANC

CSR No. 6713

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